



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,025	06/15/2000	CHRISTOPH DORR	TRW(EHR4846	6556
26294	7590	04/05/2005	EXAMINER	
TAROLLI, SUNDHEIM, COVELL & TUMMINO L.L.P. 526 SUPERIOR AVENUE, SUITE 1111 CLEVEVLAND, OH 44114			GARCIA, ERNESTO	
			ART UNIT	PAPER NUMBER

3679

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/554,025	DORR, CHRISTOPH	
	Examiner	Art Unit	
	Ernesto Garcia	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11,13,14,16-18 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 13,14,16-18 and 22-25 is/are allowed.
- 6) ☒ Claim(s) 11 and 26-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to because the cross-hatching of the joint housing 2, the bearing shell 3, and the sealing bellows 5 is incorrect. See MPEP 608.02(IX) for proper hatching.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended". If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the limitations “the plastic joint housing abutting against the outer surface of the cylindrical center part” recited in lines 10-12 of claim 11, “the inner surface of the cylindrical center part having a diameter that corresponds to an outside diameter of the bearing shell and is in abutting engagement with the outside diameter of the bearing shell” recited in line 12-16 of claim 11, “surrounded by plastic material” recited in line 19 of claim 11 do not proper antecedent basis in the specification.

The disclosure is objected to because section headers are not present. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 27 and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 27, at the time applicant had possession of the claimed invention, the subject matter "plastic material of the joint housing engaging only the outer surface of the cylindrical center part" in lines 20-21 has no support in the disclosure or the drawings. The term "only" does not appear in the disclosure and the drawings do not show plastic material engaging only the outer surface of the cylindrical center part. Looking at Figure 2, plastic material engages other parts of the ring. Accordingly, this subject matter constitutes new matter.

Regarding claim 28, the claim depends from claim 27 and therefore contains new matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham et al., 2,424,455, in view of Pazdirek et al., 5,609,433.

Art Unit: 3679

Regarding claim 11, Graham et al. disclose, in Figure 1, a ball-and-socket joint having a joint pin **15**, a joint housing **10**, a bearing shell **13a**, and a metal ring **12**. The joint pin **15** is provided with a joint ball **15a**. The bearing shell **13a** is inserted into the housing **10**. The joint pin **15** extends through the open end portion **13d**. The ring **12** has a cylindrical center part **12a** having an inner surface **B1** and an outer surface **B2**. The housing **10** abuts against the outer surface **B2** of the cylindrical center part **12a**. The inner surface **B1** of the cylindrical center part **12a** has a diameter that corresponds to an outside diameter of the bearing shell **13a** and the inner surface of the cylindrical center part is in abutting engagement with the outside diameter of the bearing shell **13a**.

The ring **12** has a radially outwardly angled flange **12b** surrounded by material of the housing **10**. The ring **12** has a radially inwardly bent end segment **12d** located in an area **A15** of an opening **A5** in the housing **10**. The radially inwardly bent end segment **12d** secures the bearing shell **13a** within the housing **10**. Applicant is reminded that the bearing shell **13a** is for a rotatable-and-tiltable support of the joint ball **15a**. The ring **12** is for positively locking the bearing shell **13a** within the housing **10**. The area **A15** of the opening **A5** is provided for passage of the joint pin **15**.

However, Graham et al. fails to disclose the housing **10** being made of plastic. Pazdirek et al. teach, in Figure 2, a ball-and-socket joint having a joint housing **12** made of plastic, thus a plastic joint housing. The housing is made of plastic to make a ball joint by making the housing molded around the bearing shell and the joint pin, and to

Art Unit: 3679

make the joint light weight (col. 4, lines 44-46). Therefore, as taught by Pazdirek et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the housing from plastic to make the joint light weight.

Regarding claim 26, as modified above, the ring **12** protrudes outwardly of the housing **10** such that the radially inwardly bent end segment **12d** is spaced away from the housing **10** in the area **A15** of the opening **A5** of the housing **10**. The open end portion **13d** of the bearing shell **13a** also protruding outwardly of the housing **10** and being secured relative to the housing **10** by the radially inwardly bent end segment **12d**.

Regarding claim 27, Graham et al. discloses, in Figure 1, a ball-and-socket joint comprising a joint pin **15**, a joint housing **10**, a bearing shell **13a** and a metal ring **12**. The joint pin **15** is provided with a joint ball **15a**. The bearing shell **13a** is inserted into the housing **10**. The ring **12** has a radially outwardly angled flange **12b** embedded in the housing **10**. The ring **12** has a radially inwardly bent end segment **12d** located in an area **A15** of an opening **A5** in the housing **10**. The radially inwardly bent end segment **12d** secures a position of bearing shell **13a** within the housing **10**. An inside diameter **A32** of a cylindrical center part **12a** of a ring **12** corresponds to an outside diameter **A33** of the bearing shell **13a**. The cylindrical center part **12a** of the ring **12** has an inner surface **B1** and an outer surface **B2**. Material of the housing **10** engages only the outer surface of the cylindrical center part **12a**. The inner surface **B1** of the cylindrical center part **12a** being free of material from the housing **10**.

However, the joint housing **10** is not made of plastic material. Pazdirek et al. teach, in Figure 2, a ball-and-socket joint having a joint housing **12** made of plastic, thus a plastic joint housing to make a ball joint by making the housing insert molded around the bearing shell and the joint pin, and to make the joint light weight (col. 4, lines 44-46). Therefore, as taught by Pazdirek et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the housing from plastic to make the ball joint light weight.

Applicant is reminded that the bearing shell **13a** is for a rotatable-and-tiltable support of the joint ball **15a**. The ring **12** is for positively locking the bearing shell **13a** within the housing **10**. The area **A15** of the opening **A5** is provided for passage of the joint pin **15**.

Regarding claim 28, the bearing shell abuts against the inner surface **B1** of the cylindrical center part **12a** of the ring **12**. The cylindrical center part **12a** of the ring **12** is interposed between the bearing shell **13a** and the joint housing **10**.

Allowable Subject Matter

Claims 13, 14, 16-18 and 22-25 are allowed.

Art Unit: 3679

The following is a statement of reasons for the indication of allowable subject matter:

regarding claims 14 and 22, the prior art of record does not disclose or suggest a ball-and-socket joint comprising a radially outwardly extending flange portion of a metal ring extending into the joint housing at a location near an equator of a joint ball of a joint pin;

regarding claims 18 and 23, the prior art of record does not disclose or suggest a ball-and-socket joint comprising a ring groove on a joint housing located radially outwardly of a cylindrical portion of the ring; the British patent 1,067,426 teaches a groove located radially outwardly of a cylindrical portion but there's no reason to combine this feature with the joint housing of Graham et al. because the threaded stem 10a will not permit placement of a groove located radially outwardly of the cylindrical portion of the housing;

regarding claim 24, the prior art of record does not disclose or suggest a ball-and-socket joint comprising a metal ring having a radially outwardly angled flange that is extrusion-coated with material of a joint housing;

regarding claim 25, the arguments presented on 1/5/04 are persuasive; Pazdirek et al. '689 teaches that plastic is required on both sides of the metal ring at a cylindrical portion; and,

regarding claim 13, this claim depends from claim 24.

Response to Arguments

Applicant's arguments filed October 6, 2004 have been fully considered but they are not persuasive.

In respect to claim 11, applicant has argued that the new language, "the metal ring has a cylindrical center part having inner and outer surfaces. The plastic joint housing abuts against the outer surface of the cylindrical center part. The inner surface of the cylindrical center part has a diameter of the bearing shell and is in abutting engagement with the outside diameter of the bearing shell when the bearing shell is received in the plastic joint housing", indicates that plastic material of the joint housing only abuts the outer surface of the cylindrical center part of the metal ring. This is not persuasive as the language is open-ended and the terms "only" does not appear in that language. Moreover, applicant makes reference to claim 25 and to Pazdirek et al. to supplement the argument. In response, the analyzes is out of scope as claim 25 has no relevance to claim 11.

Applicant further argues that Pazdirek et al. teaches away from claim 11 as Pazdirek et al. do not teach "plastic joint housing abuts only the outer surface of the cylindrical center part of the metal ring". In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies for claim 11 (i.e., plastic joint housing abuts only

Art Unit: 3679

the outer surface of the cylindrical center part of the metal ring) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In regards to claims 27 and 28, the arguments are moot in view of new ground of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. In particular, the new limitations "the ring having a cylindrical center part having an inner surface and an outer surface; the housing abutting against the outer surface of the cylindrical center part. The inner surface of the cylindrical center part has a diameter that corresponds to an outside diameter of the bearing shell and the inner surface of the cylindrical center part is in abutting engagement with the outside diameter of the bearing shell" recited in lines 9-16 of claim 11, "surrounded by plastic material" recited in line 19 of claim 11, and "plastic material of the joint housing engaging only the outer surface of the cylindrical center part" recited in lines 20-22 of claim 27 necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 3679

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-308-8606. The examiner can normally be reached from 9:30-6:00. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 703-308-2686. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 3679

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free)

E.I.

Daniel P Stodola

E.G.

March 31, 2005

DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

Attachment: one marked-up page of Graham et al., 2,424,455.

